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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/750,602

12/29/2003

Seong-Hoon Lee

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1601

8791

7590

05/24/2006

BLAKELY SOKOLOFF TAYLOR & ZAFMAN

12400 WILSHIRE BOULEVARD

SEVENTH FLOOR

LOS ANGELES, CA 90025-1030

EXAMINER

SCHLIE, PAUL W

ART UNIT

PAPER NUMBER

2186

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/750,602	Applicant(s) LEE ET AL.	
	Examiner Paul W. Schlie	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-22 have been examined as amended 4/21/06.

Response to Arguments

2. Applicant's arguments filed 4/21/06, with respect to the rejection of claims 1-22 under 35 U.S.C. 112 second paragraph have been fully considered and are persuasive in view of the claim's amendment, and has been correspondingly withdrawn.

3. Applicant's remaining arguments filed 4/21/06 have been fully considered but they are not persuasive. The applicant clearly acknowledges the claimed invention for $N=2$ within figures 1-2 of the drawings as prior art, and which is considered obvious to analogously extend for an arbitrary value of N by one of ordinary skill in the art; just as depicted within figure 9 for $N=4$ (being an embodiment of the claimed invention) and clearly showing the previously sequentially latched $D0-D2$ (i.e. `rising_d0`, `falling_d1`, `rising_d2`) signal states being simultaneously aligned with the last sequentially latched $D3$ signal state, thereby yielding N -bit parallelized data having a period of $N/2$ CLK periods for an arbitrary value of N ; as previously acknowledged as prior art for $N=2$.

With respect to figures 3-4, although also acknowledged as prior art, they more accurately depict the use of cascaded $N=2$ de-multiplexers, as opposed to the true analogous extension of figures 1-2 having $N=2$ to that of $N=4$ (with both having N = the number of corresponding align control signals, as also taught within 5,920,511 as previously cited as a reference); and correspondingly considered obvious to utilized in combination with that also acknowledged as prior art embodied within figures 1-2 as reviewed above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US App. 10/750,602).


As per claims 1-22, as the disclosure appears to merely disclose a device comprising a multi-phase synchronous time-division data de-multiplexing circuit comprising that acknowledged as "prior art" in figures 1-2 and/or 3-4 of the same disclosure being analogously applied to wider serialized data utilizing conventional logic elements as correspondingly well known by those of ordinary skill in the art, such a circuits are considered obvious to one of ordinary skill in the art at the time of the claimed invention in view of that acknowledged as prior art (and although not cited formally as the basis of the rejection, also effectively taught by the previously cited reference Lee et al. US Patent 5,920,511); thereby all claims are considered obvious to one ordinary skill in the art as a consequence of the analogous application of that acknowledged as prior art to wider datum, for the benefit of enabling synchronous multi-phase de-multiplexing of N-bit wide serialized data as may be desired utilizing correspondingly well understood logical components for their intended purpose; although the claimed limitations may be recited in different form from that acknowledged as prior art.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765. The examiner can normally be reached on Mon-Thu 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


PIERRE BATAILLE
PRIMARY EXAMINER
5118106